



Application Serial No. 10/031,105
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Response to Notice of Non-Compliant Amendment
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This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Canceled).

Claim 2 (Currently Amended) The spreader Control system according to claim 11
~~claim 1~~, wherein a plurality of ~~characterized in that~~ rope forces of different sizes have to be
generated to the multi-rope lever system for performing the telescopic movements of the
telescopic beams (3) and the different locking movements (4) of the twistlocks (6).

Claim 3 (Currently Amended) The spreader Control system according to claim 2,
characterized in that:

a first rope force has to be generated to the lever system, as the telescopic beams (3)
perform the telescopic movement;

a second rope force, is generated to locate at least one ~~as the~~ locking points (81) of the
telescopic beams (3) to move to the place of a ~~the~~ locking unit ~~units~~ (82) of the frame (2); and

a third rope force is generated to actuate ~~as~~ the twistlocks (6) of the telescopic beams
perform the locking movements, and that the first, second and third rope force differ clearly
from each other.

Claim 4 (Currently Amended) The spreader Control system according to claim 11 ~~one~~
~~of the claims 1-3~~, characterized in that the locking members (8) include a ~~the~~ locking point
(81), comprising a drive ramp (812) and a form-locking groove (811), and ~~that the~~ a locking
part ~~parts~~ (82) ~~include~~ including a locking roller (822) fitting into the form-locking groove

and a locking spring (823) locking the locking roller in said form-locking groove the compression force of the locking spring being adjustable, ~~for example~~ with a magnet (821).

Claim 5 (Currently Amended) The spreader Control system according to claim 11 ~~one of the claims 1-4~~, characterized in that the multi-rope lever system (4) is common to both the telescopic beams (3; 3a, 3b) of the spreader, and that different rope forces may be generated to the multi-rope lever system with one actuator (7).

Claim 6 (Currently Amended) The spreader Control system according to claim 5, characterized in that the external force directed to the telescopic beams (3) is partly neutralized by the elasticity of the multi-rope lever system (4) and partly by the interaction between the locking point (81) of the telescopic beams and the locking unit (82) of the frame.

Claim 7 (Currently Amended) The spreader Control system according to claim 11 ~~one of the claims 1-6~~, characterized in that the telescopic beams (3) operate as counter weights for each other with the help of the multi-rope lever system (4) and the support rollers (51), as the first telescopic beam is at a different height from the second telescopic beam.

Claim 8 (Withdrawn) Method for controlling the telescopic movements of the telescopic beams (3) in the spreader (1) and the locking movements of the twistlocks (6) in the telescopic beams by a joint multi-rope lever system (4), characterised in that

- as one wishes to move the telescopic beams (3) telescopically outwards or inwards in relation to the frame (2) of the spreader, the first locking member (8) between both the telescopic beams of the spreader and the frame is opened, the locking member including the locking unit (82) of the frame and the first locking point (81) of the telescopic beam; and the first rope force is generated to the multi-rope lever system (4) of the telescopic beams in the spreader for moving the telescopic beams in relation to the frame of the spreader;

- as the second locking points (81) in the telescopic beams (3) arrive at the place of the locking unit (82) of the spreader frame, the second rope force is generated to the multi-rope lever system (4), which force differs from the first rope force, and with which second force the second locking points (81) of the telescopic beams may be transferred to the locking unit (82) of the frame;

- as the second locking member with the second locking point (81) of the telescopic beam and the locking unit (82) of the spreader frame has been locked, the third rope force is generated to the multi-rope lever system for closing and/or opening the twistlocks (6), the third rope force being different from the first and the second rope force.

Claim 9 (Withdrawn) Method according to claim 8, characterized in that the operation of the multi-rope lever system (4) is controlled with the help of the control logic of the control system (9) and the frequency converter, and that the deviations in rope forces are calculated and reported on the basis of the detected rope forces in the lever system and the target values for the rope forces.

Claim 10 (Withdrawn) Method according to one of the claims 8 - 9, characterized in that as an external impact in the direction of the longitudinal axis of the telescopic beams hits the telescopic beams (3), causing the telescopic beams to move from the first telescopic beam position in relation to the frame into the second telescopic beam position in relation to the frame, the elastic strain accumulated to the lever system (4) returns the telescopic beams to their initial position together with the locking member (8).

Claim 11 (New) A spreader system for lifting containers comprising:

a spreader frame;

at least one telescopic beam telescopically movable in said spreader frame;

at least one locking member positioned between said spreader frame and said at least one telescopic beam for stopping the telescopic movement of said at least one telescopic beam at a desired place in relation to said frame;

at least one twistlock in said at least one telescopic beam having a locked and unlocked position;

a joint multi-rope lever system for performing the telescopic movement of said at least one telescopic beam and also for actuating said at least one twistlock;

at least one actuator operating said joint multi-rope lever system; and

a control system for supervising and controlling the operations of said at least one actuator and said joint multi-rope lever system.